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Transportation Vulnerability of the Communist Far East

It is believed that the Soviet Union would have great difficulty in supporting military operations anywhere in East and Southeast Asia because the industrial regions of the USSR are separated from areas of potential hostilities in the Far East by transportation routes of unusual length and limited capacities, which are vulnerable to military action. (As a matter of fact, in the improbable event that both the USSR and the US were to give absolute top priority to the movement of supplies into these areas, the US could move more equipment into any controlled area of the Far East than the USSR could move across Siberia to any area in the Far East, with the possible exception of Vladivostok. It is unlikely, however, that any of these areas will witness hostilities to which either power would be willing to allocate the major portion of its industrial and military resources.)

The only large traffic artery across Siberia to the Far East is the Trans-Siberian railroad, which would be essential in virtually any protracted Soviet-supplied military operation of consequence in East or Southeast Asia. According to present military estimates, this line could handle 22,500 tons per day of through wartime traffic from the Western USSR to Vladivostok. The precise basis for this estimate is not known. It is believed, however, that the principal limiting factor on the Trans Siberian line concerns the quantity of rolling stock which the USSR has allocated to Trans-Siberian traffic, rather than the capacity of the facilities themselves. Consequently, there may be a considerable flexibility upward in the capacity of this line. For example, it is currently estimated that, barring major combat damage, traffic over the Trans-Siberian could be increased perhaps as much as 25 percent if the requisite rolling stock were provided. Since there is a substantial capacity in the USSR for the production of rolling stock and locomotives, the capacity of the Trans-Siberian railroad could be built up without disrupting traffic elsewhere in the Soviet Union. Within limits, the USSR could increase capacity on this line immediately by withdrawing rolling stock and locomotives from the remainder of the Soviet network, in which case a ten percent increase in Trans-Siberian capacity, for example, might be attained by the withdrawal of only about one percent of the total rolling stock and locomotive inventories elsewhere. (Rail capacity into Vladivostok could also be augmented by several thousand tons daily by use of the Manchurian railroad system, provided the shipments originated in Manchuria. On the assumption of an effective naval blockade, no appreciable supplies could be waterborne to the Vladivostok area.)

To other areas of potential hostilities to the South and Southwest of Vladivostok, Communist transport capabilities progressively decrease and any diversion of traffic through Manchuria from the Trans-Siberian route to these areas would proportionately decrease the capacity for movements to Vladivostok.

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Estimated Through Rail Traffic Capacities from the
Western USSR to the Far East

<u>AREA</u>	<u>TONS PER DAY*</u> (Based on Transportation Corps information)
Vladivostok	22,500
North Korean border	12,500
Tientsin-Peiping	12,000
Shanghai-Nanking	3,000
Canton	3,000
Liuchow	2,000

*NOTE: These capacities would not permit delivery of the indicated quantities to more than one destination at any given time. Furthermore, they are not intended to be precise computations, but are included merely to indicate the approximate magnitude of the various capacities in question.

The capacity of the Trans-Siberian railroad far exceeds that of the rail connections to the Manchurian-North Korean border and the Trans-Siberian is therefore not a controlling factor in the ability of the USSR to move supplies to this area. There is no direct rail connection from the Vladivostok area into North Korea. By using a circuitous route from Vladivostok via Mutanchiang, however, as well as the rail lines from the Trans-Siberian through Manchuria to the North Korean border, a total rail capacity of an estimated 12,500 tons would be available. This could be augmented by movements in minor quantities through the blockade in small coastal vessels from the Vladivostok area. From the same source areas, approximately the same quantity of supplies could be alternatively transported over the rail line through Mukden south into the Tientsin-Peiping area.

For movements further south, the restricted capacity of the Chinese rail line from Tientsin to the Shanghai-Nanking area would limit rail traffic to 3,000 tons per day. An additional 3,000 tons could be placed in this area by the use of Yangtze river craft from the Hankow-rail terminus on the Peiping-Hankow railroad. Furthermore, unless the assumed blockade of the China coast were completely effective, this tonnage could be supplemented somewhat by small vessels in long-haul movements (upwards

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of 1,000 miles) along the coast from Tientsin south or from Canton and Hong Kong north. Up to 3,000 tons of supplies could be placed into the Canton area from the north over the Hankow-Canton railroad, possibly supplemented by some traffic moved by coastal shipping which might elude a blockade.

The nearest usable railhead for the support of hostilities in northern Indo-China which has through rail connections is located at Liuchow, approximately 200 miles from the Indo-Chinese border. The Hankow-Liuchow rail line has a maximum capacity of about 2,000 tons per day, which probably exceeds existent overland transport capabilities from the railhead to forward combat areas across the border. (Although there is another rail line leading south toward the Indo-Chinese border from Kunming, this line does not extend an appreciable distance above Kunming and does not connect with the remainder of the Chinese rail network.) It is likely that small additional quantities of supplies could be moved along the coast by sea for military operations in northern Indo-China.

For operations further west in the Burma area, it is estimated that about 600 tons per day could be trucked from Kunming over the Burma Road, the only important supply route in this area. It is unlikely, however, that such a volume of goods could be moved overland from Soviet or Manchurian sources as far as Kunming. In the Assam area, moreover, the mountain passes are several hundred miles removed from the nearest Chinese road system and through traffic from the Soviet Union across Tibet would be limited to a maximum of 100 tons daily. Still further west, for possible operations into Nepal and India, the communications from the USSR through Sinkiang and Tibet are virtually useless for any appreciable volume of traffic on a sustained basis. Although supply movements could theoretically be made across caravan routes in this area, in most of which motor transport is not possible, the difficulties would be so great that the volume of goods which could be moved would probably not reach 100 tons per day.

Although motor transport routes in South China leading to South Asia are of little economic importance, their military significance is disproportionate to the relatively small volume of goods which can be moved over them. This stems from the fact that they constitute the only means of transportation (except air) across China's southern border, there being no trans-border rail connections. The Chinese Communists, in fact, have expended considerable effort to improve and expand road transport in this area, presumably for military purposes.

Logistical operations by rail from the USSR to some areas of East Asia could be supplemented somewhat by truck movements. There are, for example, five highways crossing the Soviet-Manchurian border which have an estimated aggregate capacity of 1600 tons per day. Two other highways from the USSR, through Ulan Bator and Manchouli respectively, could deliver an additional 200 tons, with the possibility that this capacity

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could be materially increased by difficult and time-consuming improvements involving the allocation of major military personnel and materiel resources. The only other border crossing usable by motor vehicles is the route from Alma Ata to Lanchow in central China over which, according to a British estimate, as much as 400 tons a day could be trucked. This quantity of goods, however, would not normally affect the logistic situation in any areas of potential hostilities, since these areas have no practical overland transport connections with Lanchow.

With a sufficiently high priority, a concentrated airlift operation could be organized from remote regions of the USSR to virtually any area of potential hostilities in the Far East. On a shorter haul and with pre-arranged fuel supplies, it is estimated that a fleet of 300 Soviet twin-engine transport aircraft could deliver about 3,150 tons per month, for example, from Peiping to the Kunming area. A sustained long-range airlift operation, however, would be virtually prohibitive for the USSR, in view of the number of aircraft which would have to be allocated for the operation, as well as the serious problems connected with fuel supply.

Only through movements of supplies from major sources in the Soviet Union have been discussed above and the problem has therefore been considered only in its broadest terms. Regional and local supply operations could be conducted by various improvised means, ranging from shorter-haul airlifts down to extensive use of human and animal carriers. The foregoing discussion, furthermore, does not reflect the possibilities of stockpiling military equipment in the Far East prior to hostilities, nor probable damage to facilities and installations during hostilities.

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